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ABSTRACT

This paper describes the development and evaluation of self-instructional Spanish course designed to produce an elementary communication skill sufficient to meet conversational and travel requirements. Some 106 lessons, known as AUTOSPAN and organized in seven major sections are described. Two novel pedagogic techniques which simulate live tutoring and live conversation are used in the course. Normally, the average time required to complete the course is 80 hours. Student achievement has established the feasibility of designing self-instructional language courses to teach useful, elementary communication skills. For a more detailed report, see ED 044 996. (RL)

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Development and Evaluation of a Self-Instructional Spanish Course

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Prepared for
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16. Abstracts

This paper describes the development and evaluation of a self-instructional Spanish course designed to produce an elementary communication skill, sufficient to cope with routine situations. The course has 106 printed lessons and associated tapes. There are two novel pedagogic techniques designed to simulate the experience of using the language in a live conversational situation: simulated tutoring lessons and simulated conversation lessons. Nine military personnel with no prior Spanish training completed the course in an average of 73.7 hours. Average scores on the final examination were: 73%, 85%, and 78%. Results establish the feasibility of building self-instructional foreign language courses to teach useful, elementary, communication skill.

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Prefatory Note

This paper was prepared for the 17th International Congress of Applied Psychology which was held in Liege, Belgium in July 1971. Dr. Brown is a senior staff scientist with the Human Resources Research Organization, Division No. 7 (Social Science), in Alexandria, Virginia. Dr. Arthur J. Hoehn is Director of this HumRRO Division. The research reported herein was performed under Work Unit AUTO-SPAN, Development of a Generalized Method for Preparing Self-Instructional Foreign Language Courses.

DEVELOPMENT AND EVALUATION OF A SELF-INSTRUCTIONAL SPANISH COURSE

George H. Brown

INTRODUCTION

Each year the U.S. military establishment provides full-time language training to more than 10,000 men, and part-time language training to many more. If a portion of this instruction, particularly at the introductory level, could be conducted on a self-instructional basis, substantial economies would result. Accordingly, the Human Resources Research Organization (HumRRO) was asked to undertake the development of a programed self-study course in Spanish.

GUIDELINES FOR COURSE DEVELOPMENT

The overall objective of the course was to produce graduates who would be able to satisfy routine travel needs and courtesy requirements. That is, they should be able to communicate in Spanish sufficiently well to cope with the routine kinds of situations that a newcomer in a Spanish-speaking country might encounter.

The course should:

(a) Be completely self-instructional.

(b) Teach a general (i.e., non-military) vocabulary of about 600 words.

(c) Be oriented toward adults, with "mature" content.

(d) Teach Latin-American Spanish rather than the Spanish of Spain.

(e) Consist of a printed text and a set of tapes playable on any conventional tape recorder.

(f) Attempt to utilize, in an integrated manner, pedagogical techniques, judged to be the best, from the fields of programed instruction and tutorial instruction. Modern classroom methods were to be used.

DESCRIPTION OF THE COMPLETED COURSE

The course, 106 lessons organized into seven major sections (chapters), is called AUTOSPAN.[1] Each lesson consists of printed text material and an associated 5-inch reel of audiotape. Actual running times of the various tapes range from six to 39 minutes. In going through most lessons, the student must stop and start his tape many times, so actual performance time per lesson ranges from about 10 minutes to one hour.

Most of the lessons include a self-scoring criterion test. Students are directed to repeat each lesson as many times as necessary until they achieve a specified score on the

[1] For a more complete description, see *Development and Evaluation of a Self-Instructional Spanish Course*, by George H. Brown, Richard Beym, Thelma G. Smackey, and Angelo A. Cozzetto, HumRRO Technical Report 70-14, September 1970.

test (usually 80-90% correct). Furthermore, the last lesson in each chapter is actually a diagnostic review test. After taking each end-of-chapter test, students are directed to re-take any lessons in that chapter on which their performance has not met the criterion. Consequently, students may eventually take certain lessons as many as three or four times.

Concerning the amount of time required to complete the entire course, no empirical data are available at this time. However, a slightly shorter version of the course (10 fewer lessons) was taken by nine military students who required a mean of 73.7 hours of actual study time. It seems safe to assume that the present version of the course would require no more than 80 hours for an "average" student to complete.

There is a variety of types of lessons in the course, most involving more or less conventional programing techniques. I would like to describe in some detail two novel types of lessons that are believed to be unique to this course.

Most programed language courses become very boring to the students. They tire of interacting with the impersonal machine and crave an opportunity to try out what they have learned in a real-life situation. Two novel types of lessons were created in an attempt to meet this need—simulated tutoring lesson and simulated conversation lesson.

Simulated Tutoring Lessons

To create a simulated tutoring lesson, an experienced linguistically trained language teacher is asked to tutor a live subject in the pronunciation of a short dialogue. The recording equipment is arranged in such a way that the student and tutor both see and hear each other, but a recording is made of only the tutor's voice.

The resulting tape contains all of the tutor's instructions, explanations, and so forth, with response pauses that are automatically located and timed to conform to the needs of the situation. When another student takes the lesson later for instructional purposes, he has the feeling that he is interacting with a live tutor. Students report that the illusion is quite powerful and that the whole experience is very interesting.

Before sitting down to record a simulated tutoring session, the tutor must study the dialogue to be used and identify all pronunciation points likely to give trouble to the native American student. He makes appropriate markings on his copy of the dialogue so that he can be sure to drill and explain each of these "trouble points," even though the student who serves as his foil may not have made these particular errors.

The word "foil" is used to designate the individual who plays the role of a responding student during the recording of a tutoring session. He is called a "foil" because his own behavior is secondary to that of the tutor. By his presence and by his responses, he enables the tutor to automatically control the duration of response pauses and to perform in a more effective fashion.

The tutor and the foil sit in separate, but adjacent, soundproof studios. They see each other through a glass window separating the rooms, communicating through microphones and earphones. Only the tutor's voice is recorded on a tape recorder located in the foil's room. The tutor works from an outline rather than a script in an effort to enhance his spontaneity or life-like manner.

It is considered desirable that the tutor speak in a friendly, encouraging manner. He should, in fact, ad-lib, assuming adequate prior preparation. Occasional lapses from good English grammar, as are typical in spontaneous conversational English, are considered acceptable when recording a tutoring session.

The tutor endeavors to always speak Spanish that is correct in all its nuances. He calls attention to all (or nearly all) of the phonological features that are likely to be difficult for native English speakers. However, he avoids devoting excessive attention to those subtle features of Spanish phonology that usually are mastered only by advanced, high aptitude students. In other words, the tutor tries to keep in mind the general goal of making the student's speech intelligible but not native-like or scholarly.

Simulated Conversation Lesson

Five simulated conversation lessons, the other novel type of lesson in the AUTOSPAN course, appear only in the last chapter of the course. As might be inferred from the title, they are intended to give the student the illusion that he is actually carrying on a conversation with a real person. The broad objective is to give the student experience in coping with the unpredictability of real-life conversation and to attempt to develop in him some confidence in his ability to use the language for communication purposes.

At the beginning of each simulated conversation lesson, the student reads an introduction, in English, that describes the hypothetical situation to be simulated on the tape. He is told what sort of role he is to play and is urged to respond as appropriately and as completely as he can.

In broad terms, there are two different kinds of roles the student plays in the various lessons. In some, he plays the role of an American interacting directly with a Latin-American native. All utterances are in Spanish. In a lesson of this type, it is necessary for the student to be provided in advance with some fictitious "facts," which he must draw on in order to participate in the conversation. For example, in a shoe purchase simulation (Lesson 96) the student is informed beforehand in English, that (a) he wants *black* shoes, (b) he wears size X, and so forth. The student must, of course, memorize such information before the simulation begins.

In certain other lessons, the student plays the role of an interpreter who is assisting an English-speaking friend in conversing with a Latin-American native. In this type of simulation, it is not necessary to provide the student with much advance information since the English-speaking friend, for whom he is interpreting, can provide realistic cues for both encoding and decoding the Spanish utterances on the tape.

Each simulated conversation lesson consists of three sections or "rounds." In Round I, the student attempts to participate in the conversation as best he can and receives no assistance from the tape. Round II might be described as a "coaching session." Here, the instructors' voice interrupts frequently to (a) explain the meaning of each Spanish utterance on the tape and (b) to inform the student as to what would be an acceptable response for him to make. In other words, in Round II, the student is given training in making appropriate responses to the tape stimuli. Following each bit of instruction the original cues from Round I are reinstated so the student can practice, in context, the just-taught responses. Round III is, in effect, a replication of Round I in the sense that all assistance has been withdrawn. Theoretically, the student should now be able to respond fairly promptly and correctly.

At the conclusion of each simulated conversation lesson, the student is advised to keep repeating the entire lesson until he can participate in Round III correctly and without hesitation.

THE COURSE TRYOUT

Arrangements were made to try out the course, using military personnel, at Fort Bragg, North Carolina.

Student Characteristics

The nine tryout students met the following specifications:

(1) Age range 18 to 30.
(2) No previous training in Spanish.
(3) Desirous of learning Spanish.
(4) Free of speech or hearing handicaps.
(5) Language aptitude score between the 40th and 97th percentiles.

Three of the students were second lieutenants; the rest, noncommissioned officers, ranging in age from 21 to 30 with a median age of 22. All but two had at least some

college education, but none had a degree. Six had some previous foreign language study, although not in Spanish.

Physical Arrangements

Each student was assigned a booth in the language laboratory equipped with a tape deck, earphones, and a microphone. Each student had a complete set of course tapes for his exclusive use.

Study Schedules

It was arranged that the students would be available for a 10-week period starting in June 1969. They were to be in the lab, working on the course from 8 A.M. to 11 A.M., five days per week. It was deemed unfeasible to require students to adhere to a rigid schedule of work and breaks. They were advised that they were entitled to one 10-minute break each hour, and, in accordance with the custom at Fort Bragg, a 20-minute coffee break in mid-morning. Students were urged to take breaks only at the end of a lesson and to avoid interrupting a lesson in the middle. It appeared that this admonition was not honored since students frequently arrived late, left early, and took frequent breaks. Consequently, instead of three hours of study each day, the average student spent about 1.9 hours.

Student Performance Data

Although a 10-week period was allocated for the course, the actual number of days students were present in the lab was far less than the theoretical 50. Absences were common, either because of official holidays or because of illness or military duties. Students were present in the lab an average of 38.6 days. The total number of hours of actual study time required by each student to complete the course ranges from 59 to 81 hours, with a mean of 73.7 hours.

ASSESSING STUDENT ACHIEVEMENT

Because of the unique content and vocabulary of the course, existing nationally standardized tests were unsuitable for evaluating the achievement of the AUTOSPAN students. For this reason, a final examination was constructed based solely on course content.

Since the overall objective of the course was to develop in the student an ability to communicate in dealing with routine problems of living, the final examination was designed, both in content and in scoring procedures, to place emphasis upon adequacy of communication rather than upon elegance of pronunciation or grammar. The examination consists of three parts: (a) translating from Spanish to English, (b) translating from English to Spanish, and (c) participating in a simulated conversation. In each part of the exam, students responded orally.

In Part I of the exam, the student was presented via tape, with 64 Spanish sentences. Each sentence was presented twice, then followed by a pause during which the student was supposed to orally make an English translation. In Part II, the student was given a list of 64 printed English sentences to orally express in Spanish. His Spanish productions were tape-recorded so that they could be scored at a later time. Part III was a simulated conversation similar to the type of lesson described earlier.

The procedure used in scoring the different parts of the exam are too complex to be described herein. Each part of the exam was scored in two ways: (a) for communication effectiveness, that is, whether the intended meaning was conveyed, regardless of quality of pronunciation, and (b) for the proportion of words in each sentence that were rendered correctly.

Final Examination Scores

When scored for communication effectiveness, 56% of the average student's Spanish-to-English translations scored as successful communications. This figure is disappointingly low but is perhaps understandable in light of the fact that this part of the exam was machine-paced, and thus put time pressures on the student.

When the Spanish-to-English translations were scored on the basis of number of words correctly translated, the average score was 74%. When one considers the fact that in real life a partially understood sentence can be followed by requests for clarification, this average comprehension score of 74% seems respectable. And—it was achieved entirely by self-study in an average time of 74 hours.

Regarding the English-to-Spanish translations that are generally considered more difficult than the reverse, the average score for communication effectiveness was 75%. In other words, the average student was able to successfully communicate in Spanish, about three-fourths of the English sentences that comprised this part of the exam. The average score was 85% for total number of words correctly rendered.

The last part of the exam, a Simulated Conversation, offered the student 17 occasions when he was to respond in a socially acceptable fashion. The average student did so 78% of the time.

How Successful Was the Course as a Whole?

Because of its specific objectives and content, the AUTOSPAN course is not directly comparable with other courses. There is no meaningful control group with which the achievement of the AUTOSPAN students could be compared. Table 1 summarizes the mean scores of the tryout students on each part of the final examination.

Table 1

Mean Scores on AUTOSPAN Final Examination

	Communication Effectiveness	Total Point Score
Part I (Spanish to English)	55.7%	73.8%
Part II (English to Spanish)	74.6%	84.6%
Part III (Simulated Conversation)	78.4%	66.6%

Although the mean "communication effectiveness score" on Part I is disappointingly low, it should be remembered that this was a "time-pressured" test situation. The fact that the mean "total point score" was much higher indicates that the students generally understood at least portions of each utterance and, had they been in a real-life situation, could probably have understood much more by asking to have the Spanish sentence repeated. The mean scores on the other two parts of the examination are quite respectable.

Also, the motivational level of the tryout students was probably less than ideal. All were Special Forces personnel, who are generally regarded as more action-oriented than study-oriented. Although all nine were supposed to have volunteered for Spanish study,

several acknowledged, near the end of the course, that they were actually "reluctant volunteers." It seems reasonable to suppose that with more highly motivated students achievement in the course would have been still higher.

On the whole, it is the opinion of HumRRO that the course was successful in teaching, entirely through self-instructional means, a useful, although elementary, ability to communicate in Spanish, and in an average study time of 73.7 hours.